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MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER	
DYKE, KERRI M	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 04/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/057,041	WALL ET AL.	
	Examiner	Art Unit	
	Kerri M. Dyke	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 April 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 12, filed 4/03/06, with respect to the drawings, specification, and claim objections have been fully considered and are persuasive. The objections of the drawings, specification, and claims 2, 6, and 19 have been withdrawn.

2. Applicant's arguments filed 4/03/06 have been fully considered but they are not persuasive.

a. Applicant asserts on page 14 that Doshi is concerned solely with design and does not configure the network to build the design. Page 17 asserts that Doshi does not deliver the network service. Doshi, however, clearly states that the intention is to build the design and deliver service. The bottom of the second paragraph states, "... a desert start... mode that designs an optimal network under the assumption that there is no embedded network and that the *network is being built* without any facility constraints and ... a constrained design... mode that works with an embedded network and designs on optimal network so as *to minimize the addition of new facilities* (emphasis added)." Doshi further supports the disclosure of configuring to build the design in the end of the third paragraph, which states, "This becomes very important because it is *prohibitively expensive to lay new fiber routes or erect new buildings*. In such an instance, the constrained design makes an optimal selection from among existing node locations and *interconnects them* via existing fiber routes... (emphasis added)."

b. Page 15 asserts that Russ is not analogous art. Russ is directed to determining a restoration path and verifying the restoration path is operational. Russ, therefore, designs

a new path and then verifies the operation of the path. Russ is analogous because it is directed to designing a new path and because it is directed towards solving one of the same problems, ensuring validity and proper operation of the path.

c. Page 15 also questions the motivation presented to combine Russ with Doshi. Russ states in column 1 lines 54-55 that there is a need to verify the validity of the design of the restoration path. Further column 2 lines 42-47 state that Russ wishes to test *both* validity of the design *and* path continuity (failure). In addition, the very nature of the problems solved by Russ and Doshi suggests a desire or motivation to ensure validity of the design. The purpose of both is to ensure a new path will work correctly and therefore needs to be tested before implementation.

d. Page 16 asserts that Doshi does not teach the components of claim 7. Each of the components are disclosed in the specification as being either circuit modules or programming modules. Doshi discloses program modules that perform the exact functions of claim 7 in sections 1 and 2. The fact that Doshi does not call the modules by the same name does not negate the fact that they are the same in structure and function and therefore are the same thing regardless of name.

e. Page 17 asserts that there is no motivation provided for combining Kondo and Commerford. There is a clear motivation given on page 6 of the previous office action, reproduced below, to combine Doshi and Kondo. Further on page 6 there is motivation given to combine Commerford with the *combination of Doshi and Kondo.*

f. Page 18 asserts that there is no motivation provided for combining Russ with the combination of Doshi, Kondo, and Commerford. Clear motivation was given on page 8 of the previous action and is reproduced below.

g. Page 18 also asserts that the means plus function language was not taken into account. Page 5 lines 20-24 of the specification state the means are either computer program or circuit modules. Doshi states that the integrated network design tool is written in C++, a computer programming language. The rejection of claim 18 was written referring back to claims 16 and 7, but since both were written in reference to Doshi, the means plus function language is satisfied.

The rejections of the previous action are maintained and reproduced below.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi et al. (*Overview of INDT – A new Tool for Next Generation Network Design*) in view of Russ et al. (US 5,841,759).

5. In regards to claim 1, Doshi et al. discloses provisioning components in the network to provide a private line design; retrying the provisioning operation; and configuring the network to build a private line circuit in accordance with a private line design. Section 1 discloses that the IDNT tool can be used for six different types of networks, including private lines. Section 2

discloses how the IDNT works in detail, including the details about using the tool recursively to obtain an optimum network. Doshi et al. does not disclose validating the design or retrying the provisioning operation in response to a failed validation.

Russ et al. discloses a method of testing a network path in order to ensure validity in column 2 lines 6-7.

It would have been obvious to one of ordinary skill in the art to test the private line design of Doshi et al. using the validity test of Russ et al. because the new line may use many previously unused spare parts and thus should be checked for integrity, as taught by Russ et al. in column 1 lines 54-67.

6. In regards to claim 2, Doshi et al. and Russ et al. disclose the method of claim 1, further comprising the operations of: testing the private line circuit for failure; if testing operation detects a failure in the private line circuit, retrying the provisioning operation, the validating operation and the configuring operation to build a new private line circuit (Doshi et al. section 2 and Russ et al. column 2 lines 6-7).

7. In regards to claim 3, Doshi et al. and Russ et al. disclose the method of claim 2 further comprising the operations of: detecting availability of the components in the private line design; and retrying the provisioning operation, if one or more components are not available. Doshi et al. section 2 discloses detecting the available bandwidth of each segment and rerouting if the segment is underutilized. It would have been obvious to one of ordinary skill in the art to perform the rerouting function if the segment was not available because the lack of the asset may violate the constraints as described in section 1.

8. In regards to claim 4, Doshi et al. and Russ et al. disclose the method of claim 1 further comprising the operations of: finding an optimal route; said provisioning operation provisioning the private line design based on the optimal route (Doshi et al. section 2 and more specifically section 2.2).

9. In regards to claim 5, Doshi et al. and Russ et al. disclose the method of claim 4 further comprising the operations of: testing the capacity of the optimal route; retrying said finding and capacity testing operations if the optimal route does not have the capacity to provide the private line (Doshi et al. section 2 and more specifically section 2.2).

10. Claim 6 adds the same further limitation as claim 2 and is thus rejected upon the same grounds.

11. Claims 7-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi et al. (*Overview of INDT – A new Tool for Next Generation Network Design*) in view of Kondo et al. (US 5,586,254) further in view of Commerford et al. (US 6,134,671).

12. In regards to claim 7, Doshi et al. discloses an automated system for delivering network service in a communications network, the automated system comprising: a routing engine finding an optimal route for the network service; a provisioning system creating a circuit design of network components for the route and assigning the network component based on network records; a command control engine controlling the routing engine, the provisioning system and the service management system to deliver the network service (sections 1-2). Doshi et al. does not disclose a service management system configuring and activating network components in the design based on actual network components in the network or said command control engine, if

bad network components are detected during provisioning or configuring, controlling the routing engine, the provisioning system and the service management system to retry delivering the network service with another route and circuit design.

Kondo et al. discloses a service management system configuring and activating network components in the design based on actual network components in the network (column 11 lines 22-27).

It would have been obvious to one of ordinary skill in the art to use the management of network environment taught by Kondo et al. in order to develop the private line as taught by Doshi et al. because doing so lightens the workload of network managers, as taught by Kondo et al. in column 12 lines 1-14.

Commerford et al. discloses delivering the network service with another route and circuit design if bad network components are found in column 2 lines 16-21 and lines 28-31.

It would have been obvious to one of ordinary skill in the art to automatically detect bad components and try to route around them, as taught by Commerford et al., in the conjunction with the private line design system of Doshi et al. *and Kondo et al.* because there is recognized to be a need for dynamic rerouting based upon accurate network architecture, as taught by Commerford et al. in column 1 lines 50-57.

13. In regards to claim 8, Doshi et al., Kondo et al., and Commerford et al. disclose the system of claim 7 wherein the routing engine comprises: a test module detecting a limiting element in the optimal route that limits delivery of the network service; a mark module marking the limiting element as not useable; a retry module initiating the routing engine to find a new route if the test module detects a limiting element. Doshi et al. describes optimizing the network

in section 2.2. Commerford et al. discloses marking insufficient parts in column 2 lines 16-21 and to retry routing with an acceptable route in column 2 lines 28-31.

14. In regards to claim 9, Doshi et al., Kondo et al., and Commerford et al. disclose the system of claim 7 further comprising: a reconciliation system automatically fixing conflicts between network records and actual network components. Commerford et al. discloses updating the databases after finding a broken or unavailable component in column 2 lines 16-21.

15. In regards to claim 11, Doshi et al., Kondo et al., and Commerford et al. disclose the system of claim 7 wherein the service management system further comprises: a fault/inventory system comparing the circuit design against a live inventory of network components in the actual network and indicating an error in the circuit design if a component in the circuit design does not match a component in the live inventory; and a purge module purging the circuit design if said fault/inventory system indicates an error. Commerford et al. discloses building a database of unavailable parts in order to avoid using them for circuit designs in column 2 lines 16-31.

16. Claims 10 and 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doshi et al. (*Overview of INDT – A new Tool for Next Generation Network Design*) in view of Kondo et al. (US 5,586,254) further in view of Commerford et al. (US 6,134,671) further in view of Russ et al. (US 5,841,759).

17. In regards to claim 10, Doshi et al., Kondo et al., and Commerford et al. disclose the system of claim 7 wherein the command control engine further comprises: a mark module marking the bad network component as unavailable; and a retry module initiating the routing engine to find a new route without the network component marked unavailable if the validating

module indicates a bad network component. Kondo et al. discloses validating a design based upon network records in column 9 lines 3-8. Commerford et al. discloses marking bad segments in column 2 lines 16-21 and retrying with an acceptable route in column 2 lines 28-31. Doshi et al., Kondo et al, and Commerford et al. do not disclose a validating module validating the circuit design against the network records and indicating a bad network component that can not be validated.

Russ et al. discloses a method of testing a network path in order to ensure validity in column 2 lines 6-7.

It would have been obvious to one of ordinary skill in the art to test the private line design of Doshi et al., *Kondo et al., and Commerford et al.* using the validity test of Russ et al. because the new line may use many previously unused spare parts and thus should be checked for integrity, as taught by Russ et al. in column 1 lines 54-67.

18. Claim 12 is rejected upon the same grounds as claim 7, but Doshi et al., Kondo et al, and Commerford et al. do not disclose validity testing.

Russ et al. discloses a method of testing a network path in order to ensure validity in column 2 lines 6-7.

It would have been obvious to one of ordinary skill in the art to test the private line design of Doshi et al. using the validity test of Russ et al. because the new line may use many previously unused spare parts and thus should be checked for integrity, as taught by Russ et al. in column 1 lines 54-67.

19. In regards to claim 13, Doshi et al., Kondo et al., and Commerford et al. disclose the method of claim 12 wherein said creating operation further comprising the operations of: finding

an optimal route for the private line; and creating the design based on the optimal route for the private line (Doshi et al. section 2).

20. Claim 14 is rejected upon the same grounds as claim 8.

21. In regards to claim 15, Doshi et al, Kondo et al., and Commerford et al. disclose the method of claim 13 wherein said configuring operation further comprises the operation of: activating network elements and segments to build the private line (Doshi et al. section 2 and Commerford et al. column 2 lines 28-31).

22. Claim 16 is rejected upon the same grounds as claim 7. Commerford et al. discloses testing for a failure. If one is present the bad components are listed in a database and the good components are released into a database of available, spare parts (column 2 lines 16-34). Doshi et al., Kondo et al, and Commerford et al. do not disclose validity testing.

Russ et al. discloses a method of testing a network path in order to ensure validity in column 2 lines 6-7.

It would have been obvious to one of ordinary skill in the art to test the private line design of Doshi et al. using the validity test of Russ et al. because the new line may use many previously unused spare parts and thus should be checked for integrity, as taught by Russ et al. in column 1 lines 54-67.

23. Claim 17 is rejected upon the same grounds as claim 13.

24. Claim 18 is rejected upon the same grounds as claim 16. Doshi et al. discloses a computer apparatus and program means in section 1. Commerford et al. discloses a computer apparatus and program means in column 2 lines 10-13.

25. In regards to claim 19, Doshi et al., Kondo et al., and Commerford et al. disclose the apparatus of claim 18 wherein said means for configuring further comprises: error test means for testing the validated circuit design against actual network elements and segments to detect errors in the validated circuit design; means responsive to said error test means if an error is detected, for releasing good segments in the validated circuit design; and means responsive to said error test means if an error is detected, for retrying said means for provisioning and said validity means to provision, assign and test a circuit design that does not contain bad segments and bad ports and is a validated circuit design and for retrying said means for configuring to provide the network service. Commerford et al. discloses ensuring bad segments are not included in the design and choosing only a valid, error free route in column 2 lines 16-31.

26. In regards to claim 20, Doshi et al., Kondo et al., and Commerford et al. disclose the apparatus of claim 19 wherein said validity means tests the circuit design against an asset inventory database of network records of network elements and segments (Kondo et al. column 9 lines 3-8).

27. In regards to claim 21, Doshi et al., Kondo et al., and Commerford et al. disclose the apparatus of claim 20 wherein said error testing means tests the validated circuit design against a live inventory database of actual network elements and segments (Commerford et al. column 2 lines 16-21).

28. In regards to claim 22, Doshi et al., Kondo et al., and Commerford et al. disclose the apparatus of claim 21 further comprising: means for reconciling differences between the asset inventory database and the live inventory database. Commerford et al. discloses updating each database to ensure accuracy in column 2 lines 20-21.

29. Claim 23 is rejected upon the same grounds as claim 13.

30. In regards to claim 24, Doshi et al., Kondo et al, Commerford et al., and Russ et al. disclose the apparatus of claim 23 wherein said means for finding comprises: capacity means for testing the capacity of the optimal route and marking network elements limiting the capacity; means for initiating a retry by said means for finding to find an optimal route without network elements marked by said capacity means so that an optimal route is found with a capacity to satisfy the network service (Doshi et al. sections 2.2 and 2.3).

Conclusion

31. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri M. Dyke whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Friday, 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kmd

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600